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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,550	12/04/2003	Lei Jiang	110348-133039	8781

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EXAMINER

NGUYEN, DUNG V

ART UNIT PAPER NUMBER

3723

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/728,550

Applicant(s)

JIANG ET AL.

Examiner

Dung V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 15-18, 21-23, 25 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7-10, 19, 20, 24, 27, 29, 30 and 32 is/are rejected.
- 7) ☒ Claim(s) 3-6, 11-14, 26, 28, 31 and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of species 1, claims 1-14, 19, 20, 24 and 26-33 in the reply filed on 23 August 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Drawings***

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "34" has been used to designate both wafer and axis in figure 3 and reference character "36" has been used to designate both surface and arrow. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement

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sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

4. The disclosure is objected to because of the following informalities: typo error, paragraph [0018], line 7, "wafer 36" should be "wafer 34", paragraph [0020], line 10, "pad 52" should be "pad 50". Appropriate correction is required.

***Claim Objections***

5. Claims 12 is objected to because of the following informalities: dependency, claim 12 should depend on claim 11 instead of claim 8 for "both of pairs of opposite sides" to have proper antecedent basis. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 7-10, 19, 20, 24, 27, 29, 30 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Kennedy et al (USPN 6,139,406). Kennedy et al discloses a method and a system for manufacture a wafer comprising an apparatus for polishing wafer comprising a rotating polishing pad 22 having a center of rotation, a

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rinse delivery conduit 38 positioned adjacent to the polishing pad 22 and substantially in radial alignment with the center, the rinse delivery conduit 38 including a plurality of nozzles 34 and 36 to dispense a rinsing liquid, the plurality of nozzles being configured and positioned to generate a higher flow rate of the rinsing liquid at the end 28 of the rinse delivery conduit 38 proximate to the center than at the end 26 of the rinse delivery conduit 38 distal to the center, a slurry dispensing arm 24 being radially aligned above the pad 22 and the rinse delivery conduit 38 being mounted inside of the slurry dispensing arm 24, a controller coupled to the polisher to control the dispensing of the rinse fluid, wherein the rinse delivery conduit 38 has a proximal end 28 and a distal end 26, the proximal end 28 being substantially adjacent to the center and the distal end 26 being approximately adjacent to an outer periphery of the pad 22, wherein the two nozzles 34 and 36 proximate to the center are spaced-apart by a first distance and the two nozzles 34 distal to the center are spaced-apart by a second distance, the first distance being smaller than the second distance. Kennedy et al also discloses a method for polishing wafer comprising rotating a polishing pad 22, rinsing the pad 22 with a rinsing liquid along a fixed radial line extending from the periphery of the pad 22 to the center of the pad 22 while the pad is rotating, adjusting the rising liquid to have a flow rate at an inner region of the pad 22 proximate to the center greater than that of the outer region of the pad 22 distal to the center (note Fig. 2-4, col. 3, line 62 to col. 6, line 5).

***Allowable Subject Matter***

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8. Claims 3-6, 11-14, 26, 28, 31 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: prior art of record considered as a whole alone or in combination neither anticipates nor renders obvious, the nozzle proximate to the center has an internal diameter greater than that of the nozzle distal to the center, in combination with the rest of the limitations in claim 3; prior art of record considered as a whole alone or in combination neither anticipates nor renders obvious, the rinse delivery conduit is formed by two pair of opposite sides, at least one pair of opposite sides are tapered in the direction of the center, in combination with the rest of the limitations in claim 11.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Huey, Manfredi and Inoue et al are cited to show a method and apparatus for rinsing a polishing pad.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung V Nguyen whose telephone number is 703-305-0036. The examiner can normally be reached on M-F, 6:30-3:00.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail can be reached on 703-308-2687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DVN  
October 30, 2004



**DUNG VAN NGUYEN**  
**PRIMARY EXAMINER**